A REVISION OF THE IPOINAE (HOMOPTERA, EURYMELIDAE).

By J. W. Evans, M.A., F.R.E.S.,
Division of Entomology, Council for Scientific and Industrial Research.

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Introduction.

It has been the custom in the past to place all leaf-hoppers with the ocelli situated on the ventral surface of their heads in the Family Bythoscopidae (Superfamily Cicadelloidea). This has been done largely for convenience, since this character by itself is of little phylogenetic significance.

Three groups of leaf-hoppers are found in Australia with this character. These are *Eurymela* Le P. & S. and related genera; *Bythoscopus* Germ. and related genera; and *Idiocerus* Lewis and related genera.

In order to facilitate the classification of the first group it is proposed to give it Family rank, and the following classification is proposed for the Australian leaf-hoppers that have their ocelli ventrally placed:—

Superfamily: JASSOIDEA.

A. Family: BYTHOSCOPIDAE.

1. Subfamily: Bythoscopinae.

Bythoscopus Germ., *Macropsis* Lewis, *Trocnada* Walk., *Alseis* Kirk., *Epipsychidion* Kirk., *Eurinoscopus* Kirk., *Oncopsis* Burm.

2. Subfamily: Idiocerinae.

Idiocerus Lewis, *Pedioscopus* Kirk.

B. Family: EURYMELIDAE.

Subfamily: Eurymelinae.
Subfamily: Pogonoscopinae.
Subfamily: Ipoinae.

This paper is primarily concerned with the classification of the Ipoinae; but, in order that students in this country may be able to distinguish representatives of the Bythoscopidae from the Eurymelidae, descriptions are given at the end of the paper of two new species, one belonging to a new genus of the Bythoscopinae and the other to the genus *Idiocerus*.

In addition, a re-description is given of a species described by Jacobi in 1909 under the name of *Ipo procurrens*. This species cannot be placed in any of the known subfamilies of either the Eurymelidae or the Bythoscopidae, although it has certain Eurymeloid characters in addition to others that suggest a possible relationship with the Idiocerinae. A new genus, *Ipocerus*, has been erected to contain it, which for convenience is here grouped with the Ipoinae, until such a time as its position may be better understood.

Eurymelidae.

The Eurymelidae, unlike the Bythoscopidae, are confined to the Australian region, and, as a result of recent work by China (1926)[1] and the present author (1933),[2] have been divided into three groups, which were previously given tribal rank, but are now raised to subfamilies.

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[1] China, W. E., Trans. Ent. Soc., London, 1926 (2), 289.

[2] Evans, J. W., Trans. Roy. Soc., South Austr., 57, 1933.

The Eurymelinae are wedge-shaped insects, blue, black or brown in colour, most species having white or coloured fasciae on their forewings. The subgenital plates of the males are large and broad, and invariably have a style arising from one of their edges. All species, as far as it is known, feed on Eucalyptus trees, and they are all attended by ants.

The Pogonoscopinae are light or dark brown in colour, and frequently have white fasciae on their forewings. They differ very markedly from the other tribes owing to structural modifications brought about by their close association with ants, both the nymphs and adults actually living in ants' nests. Their legs, even in the nymphal stages, are very long, and their eyes small, both characters found in many arthropods that live in the dark. They have no spurs on their hind tibiae, and their labiums reach well past the bases of their hind legs. Like the Eurymelinae, they appear to be confined to Eucalyptus trees.

The Ipoinae comprise a number of genera more or less closely related to each other. They lack the typical Eurymeloid colour pattern, are not confined to eucalypts, are all ant attended, and, with a few exceptions, the males have no styles on the subgenital plates. In addition to those insects comprised in these three tribes, there exist a number of small species, possessing typical Eurymeloid colouration but resembling the Ipoinae in the structure of the male genitalia. Since the material at present available of these species is scanty, their description and classification is postponed.

The multiplicity of genera, paucity of species within the genera, and the wide distribution of many of the species over the continent, suggests that the Eurymelidae are a very ancient race of insects that possibly had their origin in South-Western Australia, since the Pogonoscopinae and *Ipo procurrens* of Jacobi are largely confined to this area, although the Eurymelinae and Ipoinae extend to Eastern Australia, and as far as New Guinea and New Caledonia.

Key to the Genera of the Ipoinae.

1. Hind tibia with only one distinct spur, with or without additional spines. .. 2
   Hind tibia with more than one distinct spur. 9

2. Frons produced, either into a horn, a spatulate process, or as a ledge overhanging the clypeus 3
   Frons not produced, either flat or slightly convex 5

3. Front and middle femora with short blunt spurs on their interior edges; pronotum narrow laterally, the propleuron not produced posteriorly into a toothlike process; the frons produced anteriorly into a narrow ledge that overhangs the clypeus.
   Anacornutipo, gen. nov.
   Type Eurymela lignosa Walker.

   Front and middle femora spurless; pronotum wide at the sides, the propleuron produced posteriorly into a tooth-like process; frons not produced anteriorly into a narrow ledge. 4

4. Frons produced into a spatulate process. .. .. .. Cornutipo, gen. nov.
   Type Cornutipo scalpellum, n. sp.

   Frons produced into an upward turning horn; vertex produced into two downturned horns. .. .. Cornutipoides, gen. nov.
   Type Cornutipoides tricornis, n. sp.

5. Hind tibia with one spur and no spines; species yellowish or pale reddish-brown in colour. .. .. Anipo, gen. nov.
   Type Eurymela porriginosa Signoret.

   Hind tibia with a few or numerous spines in addition to a single spur. 6

6. Crown of head from above, broad between the eyes, not merely a narrow margin. 7
   Crown of head from above visible only as a narrow margin; tegmina largely hyaline; sub-genital plates with small apical styles. .. .. .. Ipoella, gen. nov.
   Type Ipoella fidelis, n. sp.

7. Subgenital plates broad (fig. A, figs. 6 and 7) 8
Subgenital plates narrow (fig. A, figs. 8-12) .. .. IPOIDES, gen. nov.
Type IPOIDES HACKERI, n. sp.

8. Small species resembling *Ipo* Kirk. in shape and colouration, the tegmina steeply tectiform .. .. STENIPO, gen. nov.
Type STENIPO SWANI, n. sp.
Species not resembling *Ipo* Kirk. in shape or colouration; tegmina not steeply tectiform. .. .. CITRIPO, gen. nov.
Type CITRIPO FLANDERSI, n. sp.

9. Hind tibia with two spurs and numerous spines. 10
Hind tibia with three spurs and numerous spines. 11

10. Tegmina broad, hyaline or hyaline with black and white areas; appendix continuing broadly round the apex of the tegmen; subgenital plates broad, the parameres reaching to the apices of the plates. .. .. IPO Kirkaldy
Type IPO PELLUCIDA, F
Tegmina narrow; appendix continuing narrowly round the apex of the tegmen; subgenital plates narrow, the parameres not more than half the length of the plates. KATIPO, gen. nov.
Type EURYMELOIDES RUBRIVENOSUS, Kirk.

11. Hind tibia with one large spur on one of the inner edges of the tibia, and two slightly smaller ones on the other edge; head broader than long; subgenital plates with small styles. .. .. PAURIPO, gen. nov.
Type PAURIPO INSULARIS, n. sp.
Hind tibia with three spurs decreasing in size from the apex of the tibia to the base, all on the same edge of the tibia; head almost as long as broad; subgenital plates without styles. .. .. OPIO, gen. nov.
Type BYTHOSCOPUS MULTISTRIGIA Walker.

The above key is an artificial one and does not group the genera into any natural order. They can, however, be separated into four distinct tribes:—The Ipoini, comprising *Ipo, Stenipo* and *Ipoides;* the Anipoini, comprising *Anipo, Katipo, Citripo* and *Ipoella;* the Cornutipoini, comprising *Cornutipo, Cornutipoides* and *Anacornutipo;* and finally the Opioni, containing the isolated genus *Opio.*

The colour patterns of the majority of the species comprised in the Eurymelidae are extremely variable, and descriptions largely based on a detailed account of the colouration of a few individuals are of little value. The characters afforded by the male genitalia are valuable for both specific and generic determination, and accordingly figures are given for every species described in this paper.

Ipoini.

IPO Kirkaldy.

H.S.P.A. Exp. Sta. Rec. Bull. 1 (9); 464, 1906.

Wedge-shaped insects, the tegmina steeply tectiform apically; head much broader than long, slightly rounded, maxillary plates broad, antennal pits shallow, eyes prominent, the labium just reaching to the base of the hind legs, the crown of the head from above only visible laterally against the eyes; tegmina broad, the appendix narrow, continuing round the apex of the tegmen to the costal margin; hind tibia with two spurs and numerous strong spines; male genitalia with large flat-subgenital plates and long parameres, the aedeagus with a strong armature of spines at the apex and without an anterior ventral process.

Species comprised in this genus are apparently confined to the tropical regions of the continent.

IPO PELLUCIDA F. (Fig. A, fig. 15.) (Genotype.)

Cicada pellucida Fabricius. Entom. Syst. 4; 41, 60, 1794. *Ipo ambita* Kirkaldy, H.S.P.A. Exp. Sta. Rec. Bull. 1 (9); 464, 1906. *Ipo aegrota* Kirkaldy, H.S.P.A. Exp. Sta. Rec. Bull. 1 (9); 464, 1906.

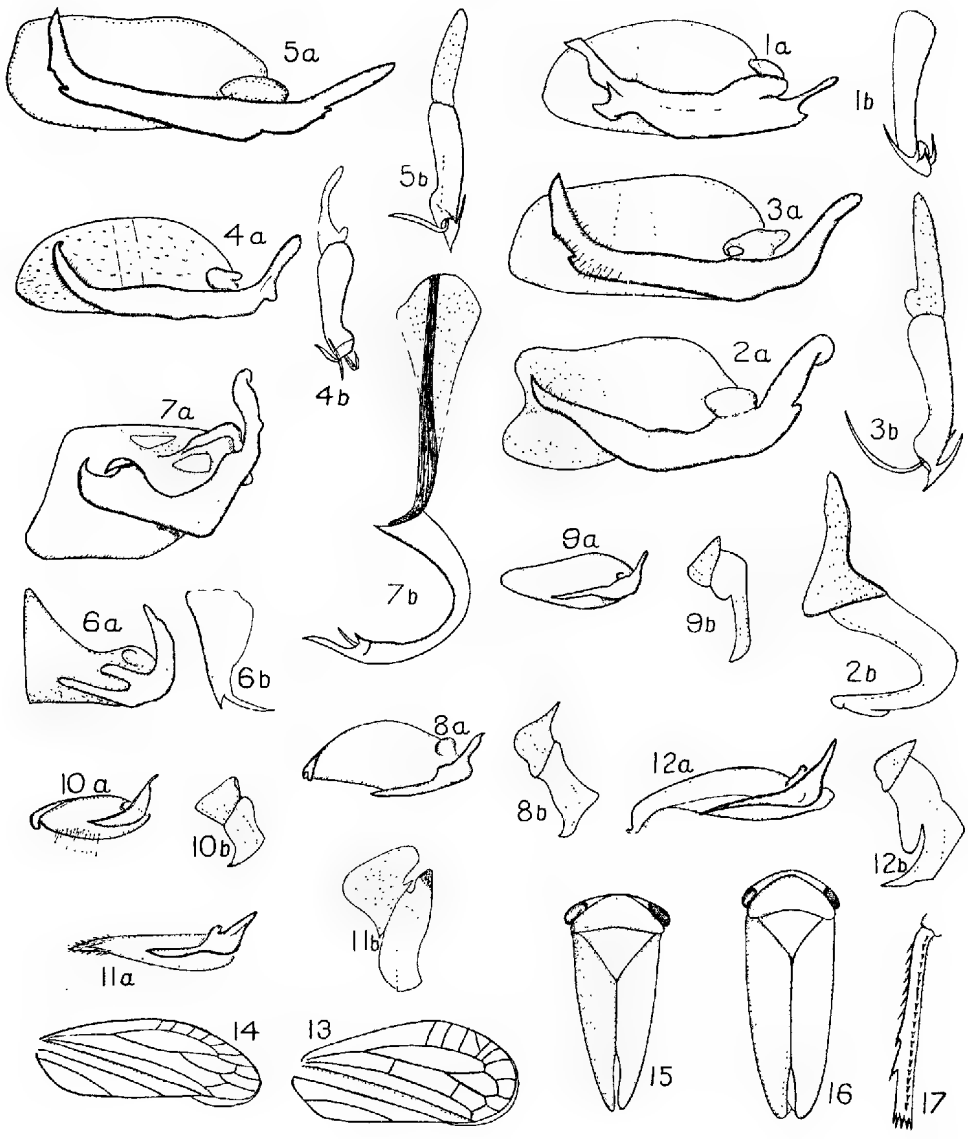

Fig. A.

Figure 1a .. *Ipo pellucida*, subgenital plate and paramere.
„ 1b .. „ „ aedeagus.
„ 2a .. *Ipo conferta*, subgenital plate and paramere.
„ 2b .. „ „ aedeagus.
„ 3a .. *Ipo honiala*, subgenital plate and paramere.
„ 3b .. „ „ aedeagus.
„ 4a .. *Ipo hilli*, subgenital plate and paramere.
„ 4b .. „ „ aedeagus.
„ 5a .. *Ipo sordida*, subgenital plate and paramere.
„ 5b .. „ „ aedeagus.
„ 6a .. *Stenipo swani*, subgenital plate and paramere.
„ 6b .. „ „ aedeagus.

(Continued on opposite page)

Description.—Length, ♂, 6-7 mm.; ♀, 8-9 mm. (from the apex of the head to the tip of the folded tegmina). Head, width between the eyes 3-4 mm., chestnut brown suffused to a varying extent with dark brown. Pronotum, pale or dark brown, with or without a median longitudinal white stripe. Scutellum, smooth, pale or deep chestnut brown. Tegmen, entirely hyaline or transparent, or hyaline or transparent but for a broad anterior hyaline white fascia; anterior costal and claval area punctate; veins dark brown or black with white bars. The tegmen may be mottled with dark brown to a varying extent. Thorax, ventrally pale brown. Legs, femora pale brown, tibiae and tarsi dark brown or black, but for the first tarsal segment of the hind legs, which is white. Abdomen, ventral surface, pale brown. Male genitalia, as in fig. A, figs. 1a and 1b. Parameres bifurcate and extending beyond the apices of the subgenital plates. Aedeagus straight, bearing a strong armature of spines at the apex.

Distribution.[3]—Queensland and Northern Australia.

Ipo conferta Kirkaldy.

Ipo conferta Kirk., H.S.P.A. Exp. Sta. Rec. Bull. 1 (9); 465; 1906. *Ipo pompais* Kirk., H.S.P.A. Exp. Sta. Rec. Bull. 3; 35, 1907.

Description.—Length, 5-7·5 mm. Head, width, 3 mm., punctate; pale yellowish-brown, mottled with dark brown or black, maxillary plates and lorae pale, eyes reddish-brown, not as prominent as in other species in this genus. Pronotum, narrow, punctate, ochreous mottled with dark brown or black. Scutellum, ochreous brown or black with a few pale yellow markings. Tegmen, pale yellowish-hyaline, sparsely mottled with dark brown or black; veins, white or black; an indistinct white hyaline anterior fascia, widest against the costal margin of the tegmen, or tegmen almost entirely suffused with black, except for yellow mottlings on the clavus and an anterior irregular opaque white fascia, not transverse, and a hyaline area against the distal costal margin, which is mottled with black; tegmen, narrow apically. Thorax, ventral surface, pale yellowish-brown. Legs, coxae and proximal two-thirds of the femora pale brown, the rest marked with a pattern of black and brown. Abdomen, ventral surface, pale yellowish-brown. Male genitalia, as in fig. A, figs. 2a and 2b. The distal halves of the ventral edges of the subgenital plates are thickened, the parameres simple, not bifurcate, and the aedeagus curved, not straight

Distribution.—Queensland.

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[3] Distribution records refer to specimens actually examined, and do not necessarily indicate the limits of any species.

Fig. A (continued).

Figure 7a .. *Stenipo bifurcata*, subgenital plate and paramere.
„ 7b .. „ „ aedeagus.
„ 8a .. *Ipoides hackeri*, subgenital plate and paramere.
„ 8b .. „ „ aedeagus.
„ 9a .. *Ipoides leai*, subgenital plate and paramere.
„ 9b .. „ „ aedeagus.
„ 10a .. *Ipoides translucens*, subgenital plate and paramere.
„ 10b .. „ „ aedeagus.
„ 11a .. *Ipoides ooldeae*, subgenital plate and paramere.
„ 11b .. „ „ aedeagus.
„ 12a .. *Ipoides casurinae*, subgenital plate and paramere.
„ 12b .. „ „ aedeagus.
„ 13 .. *Ipo hilli*, tegmen.
„ 14 .. *Ipoides casurinae*, tegmen.
„ 15 .. *Ipo pellucida*.
„ 16 .. *Ipoides hackeri*.
„ 17 .. *Ipo hilli*, hind tibia.

Ipo honiala Kirkaldy.

Ipo honiala Kirk., H.S.P.A. Exp. Sta. Rec. Bull. 1 (9); 465, 1906.

Description.—Length, 5-6 mm. Head, width, 3 mm.; crown and vertex pale yellowish-brown suffused with dark brown, the rest of the head pale yellowish or reddish-brown. Pronotum, punctate, grey, mottled with dark brown or black. Scutellum, smooth, black or dark brown, the posterior angle yellow. Tegmen, dark brown or black, an indistinct anterior transverse white or hyaline fascia, the apical third of the tegmen hyaline, and there may be other small hyaline areas scattered over the tegmen; veins brown or black. Thorax, ventral surface dark brown or black. Legs, brown or black. Abdomen, ventral surface, pale yellowish-brown. Male genitalia, as in fig. A, figs. 3a and 3b. The aedeagus straight, one of the apical spines very long and curved.

Distribution.—Queensland.

Ipo hilli, n. sp.

Description.—Length, ♂, 5 mm., ♀, 7 mm. Head, width, 3 mm., light or dark brown mottled with buff; maxillary plates and lorae largely pale brown, the rest of the head mostly dark brown. The whole surface of the head is covered with short hairs. Pronotum, grey mottled with dark brown, and with a broad median longitudinal grey stripe, also hairy. Scutellum, light or dark brown, the posterior margin yellow. Tegmen, anterior claval and costal areas punctate; the anterior two-thirds of the tegmen deep chocolate brown with brown veins, the posterior third transparent with white veins. There is an anterior transverse fascia divided into two areas, one in the costal and one in the claval area, the latter lying along the margin of the scutellum. There are a few small round and narrow longitudinal hyaline areas on the dark part of the tegmen (fig. A, fig. 13). Thorax and abdomen, ventral surface, pale brown. Legs, proximal halves of the femora pale brown, distal halves dark brown; tibiae dark brown with white oval spots, and one or more of the edges of the hind tibiae may be white (fig. A, fig. 17). Male genitalia, as in fig. A, figs. 4a and 4b.

Distribution.—Northern Australia.

Type ♂, from Darwin (coll. G. F. Hill), paratype ♀, both specimens in the collection of the South Australian Museum.

Ipo sordida, n. sp.

Description.—Length, 5 mm. Head, width 2·5 mm.; pale chestnut brown and very dark brown or black, the areas covered by the two colours varying in extent. The head is covered with fine short hairs. Pronotum, grey, densely mottled with dull brown. Scutellum, chestnut brown or very dark brown. Tegmen, largely hyaline, the anterior costal and claval areas punctate; an indistinct broad anterior transverse whitish fascia, veins brown. The whole tegmen is mottled with dull brown, especially in the neighbourhood of the veins, which are faintly and irregularly barred with white. Thorax, ventral surface dark brown. Legs, femora very dark brown with pale areas; tibiae, pale brown. Abdomen, ventral surface, pale brown. Male genitalia as in fig. A, figs. 5a and 5b. Similar in shape to those of *I. honiala,* the recurved spine at the apex of the aedeagus being smaller in this species.

Distribution.—Thursday Island, Queensland.

Type, ♂, from Thursday Island (coll. A. M. Lea); paratypes, 1 ♂ and 1 ♀; all three specimens in the collection of the South Australian Museum.

Ipo torpens Jacobi.

Ipo torpens Jacobi, Faun. Südwest-Austral., Ergeb. d. Hamburg S. Austral. Forschungsreise 1905, Michaelsen u. Hartmeyer, ii., 20; 341, 1909.

This species, from Mongers Lake, near Subiaco, Western Australia, is unknown to me. Although impossible to place in any genus from the description alone, it is probable that it belongs either to the genus *Ipoides* or *Stenipo,* rather than to *Ipo,* since the length is given by Jacobi as 4·5 mm., also no representatives of the genus *Ipo* have been recorded from Western Australia.

Stenipo, gen. nov.

This genus is very closely related to *Ipo* Kirk., the species comprised in it being smaller, and differing from those in the previous genus in the following characters:—The vertex of the head is broadly visible from above and is as wide in the middle as against the eyes, the tegmina are narrow and the hind tibiae have only one spur in addition to numerous spines.

Stenipo swani, n. sp. (Genotype.)

Description.—Length, 4 mm. Head, width, 2 mm., yellowish-grey suffused with dark brown, in some specimens the frons is pinkish. Pronotum, greyish sparsely mottled with dark brown. There is a broad grey longitudinal median stripe and two brown oval areas lying against the anterior margin. Scutellum, greyish mottled with pale and dark brown. Tegmen, hyaline, the anterior costal and claval areas punctate; there may be a narrow anterior and a broad posterior transverse white fascia, or the tegmen may be almost entirely yellowish-hyaline or opaque; veins black with white bars. Thorax, ventral surface, very dark brown. Legs, pale brown. Abdomen, ventral surface, very pale brown. Male genitalia, as in fig. A, figs. 6a and 6b. Subgenital plates more or less triangular in shape; parameres deeply bifurcate; aedeagus boot-shaped. Host plant, Melaleuca sp.

Distribution.—Rottnest Island, Western Australia.

Type ♂, from Rottnest Island (coll. D. C. Swan, 1/31), in the collection of the C.S.I.R. Division of Entomology at Canberra. Described from a long series of males and females.

Stenipo bifurcata, n. sp.

Description.—Length, 5 mm. Head, 2 mm. wide; the anterior half pale yellowish-brown, the posterior brown, densely mottled with very dark brown and black. Pronotum, greyish, mottled with dark brown; an indistinct broad grey median longitudinal stripe, and two pale brown oval areas lying against the anterior margin. Scutellum, dark brown and grey, the anterior corners chestnut brown. Tegmen, proximal half whitish-opaque, the distal half yellowish-hyaline; anterior costal and claval areas punctate; veins brown with white bars. Thorax, ventral surface dark brown. Legs, pale brown. Abdomen, ventral surface, pale brown. Male genitalia, as in fig. A, figs. 7a and 7b. Subgenital plates wide; aedeagus strongly curved.

Distribution.—South Australia.

Type ♂, paratype ♀, both specimens from Corney Point, South Australia, and both in the collection of the South Australian Museum.

Ipoides, gen. nov.

This genus is closely related to *Stenipo.* The crown is visible dorsally as a broad border, slightly wider against the eyes than in the middle. Tegmina narrow, the appendix big. Hind tibia with one spur and a few small spines. Male genitalia with narrow subgenital plates, short parameres, and the aedeagus without apical spines.

Ipoides hackeri, n. sp. (Genotype.) (Fig. A, fig. 1b.)

Description.—Length, 4 mm. Head, width, 2 m.m,, marked with an irregular pattern of yellow and dark brown, the maxillary plates usually pale, the vertex dark brown and the posterior margin of the crown dull greyish-yellow. Pronotum and scutellum, dull grey mottled with dark brown. Tegmen, transparent, veins pale brown with white bars; some specimens have a trace of a narrow anterior fascia; appendix not continuing round the apex of the tegmen. Thorax, ventral surface dark brown. Legs, pale yellowish-brown. Abdomen, ventral surface pale brown. Male genitalia as in fig. A, figs. 8a and 8b. Subgenital plates recurved at apices, parameres short, aedeagus simple, with no spines or processes.

Distribution.—Queensland.

Type, ♂, from Brisbane (coll. H. Hacker), in the collection of the South Australian Museum. Described from a long series of both sexes.

Ipoides leai, n. sp.

Description.—Length, 4 mm. Head, width, 1·5 mm., ochreous marked with an irregular pattern of dark brown and black. Pronotum, greyish and ochreous mottled with dark brown. Scutellum, dark brown or black with an imperfectly rounded pale area. Tegmen, yellowish-hyaline; an irregular whitish anterior fascia stretching diagonally across the tegmen from near the centre of the costal margin to the apex of the scutellum; veins dark brown barred with white; appendix not continuing round the apex of the tegmen. Thorax, ventral surface dark brown. Legs marked with a variable pattern of light and dark brown. Abdomen, ventral surface, pale brown. Male genitalia, as in fig. A, figs. 9a and 9b. Aedeagus with a very slight anterior ventral process.

Distribution.—New Caledonia.

Type, ♂ from Noumea (coll. A. M. Lea), paratypes 2 ♂'s and 1 ♀; type and paratypes in the collection of the South Australian Museum.

Ipoides translucens, n. sp.

Description.—Length, 4 mm. Head, width 1·7 mm., greyish-buff but for the maxillary plates and lorae which are evenly mottled with dark brown and yellow. Pronotum and scutellum, grey mottled with dark brown. Tegmen, transparent, with two brown spots against the hind margin of the clavus; veins pale brown with white bars; appendix continuing narrowly round the apex of the tegmen. Thorax, ventral surface black. Legs, proximal two-thirds of femora black, distal two-thirds yellowish; tibiae yellowish, the apices of the hind tibiae black. Abdomen ventral surface pale brown. Male genitalia, as in fig. A, figs. 10a and 10 b. Subgenital plates recurved at apices; aedeagus simple.

Distribution.—Queensland.

Type, ♂ from Townsville (coll. F. P. Dodd), paratype ♀, both specimens in the collection of the South Australian Museum.

Ipoides ooldeae, n. sp.

Description.—Length, 5 mm. Head, width, 2·2 mm.; crown from above wider against the eyes than in the centre; head pale yellowish-brown with a few scattered brown spots; eyes and ocelli black, frons distinctly convex (more so than in other species in this genus). Pronotum and scutellum, either entirely greyish-yellow or greyish-yellow mottled with brown or dark brown. Tegmen, transparent; veins brown with white bars; appendix continued very narrowly round the apex of the tegmen. Thorax, ventral surface pale yellowish-brown. Legs, pale yellowish-brown streaked with dark brown. Abdomen, ventral sur-

face, pale yellowish-brown. Male genitalia, as in fig. A, figs. 11a and 11b. Subgenital plates very narrow apically, aedeagus with a posterior dorsal thickening.

Distribution.—Ooldea, South Australia.

Type, ♂ from Ooldea (coll. A. M. Lea), paratypes 1 ♂, 4 ♀'s; type and paratypes in the collection of the South Australian Museum.

Ipoides casurinae, n. sp.

Description.—Length, 5 mm. Head, width, 2 mm., pale yellow mottled with a distinct though variable pattern of light and dark brown, the maxillary plates and lorae invariably pale yellow. Crown from above wider against the eyes than in the centre. Pronotum and scutellum, yellowish-grey mottled with dark brown. There is an indistinct median pale longitudinal stripe on the pronotum. Tegmen (fig. A, fig. 14), hyaline, or with a narrow curved anterior white fascia, which may be only partially developed; veins dark brown with white bars; appendix continuing narrowly round the apex of the tegmen. Thorax, ventral surface dark brown. Legs, pale brown. Abdomen, ventral surface pale brown. Male genitalia as in fig. A, figs. 12a and 12b. The subgenital plates are narrow and the aedeagus has an anterior ventral process, but the genitalia resemble those of the genotype in the apical curvature of the subgenital plates, and in the boot-shaped aedeagus. Host plant, *Casuarina,* spp.

Distribution.—Queensland, New South Wales and Western Australia.

Type, ♂ from Canberra, F. C. T. (coll. J. W. E.), in the collection of the C.S.I.R. Division of Entomology at Canberra, described from a long series of males and females.

Note.—The above species so closely resembles the other species comprised in the genus *Ipoides,* that it is included in this genus, in spite of the fact that the male genitalia do not resemble very closely those of the genotype.

Anipoini. **Ipoella,** gen. nov.

This genus differs from the preceding ones in the following characters:—The labium only reaches to between the middle pair of legs; the head is only visible from above as a very narrow edge in the centre, though slightly wider against the eyes; the anterior margin of the pronotum is at a much lower level than the posterior margin; the tegmina have numerous costal cells; the hind tibiae have a few small spines in addition to one large spur; the subgenital plates in the male are broader, and the aedeagus is differently shaped.

Ipoella fidelis, n. sp. (Genotype.)

Description.—Length, 6 mm. Head, width, 2·5 mm., greyish-yellow with a dark brown T-shaped area, stretching from the base of the clypeus to a little above the dorsal margin of the frons, and extending laterally to the eyes. Pronotum, grey, mottled with dark brown. Scutellum, yellowish-brown. Tegmen, hyaline, irregularly mottled with dull brown; veins brown with white bars. Thorax, ventral surface black. Legs, pale brown streaked with dark brown. Abdomen, ventral surface pale brown. Male genitalia, as in fig. B, figs. 1a and 1b. Subgenital plates broad with a small spine attached to the apical finger-like process; parameres short and broad.

Distribution.—Bunya Mountains, Queensland.

Type, ♂ from the Bunya Mountains (coll. H. Hacker); paratypes 1 ♂ and 1 ♀. Type and paratypes in the collection of the South Australian Museum.

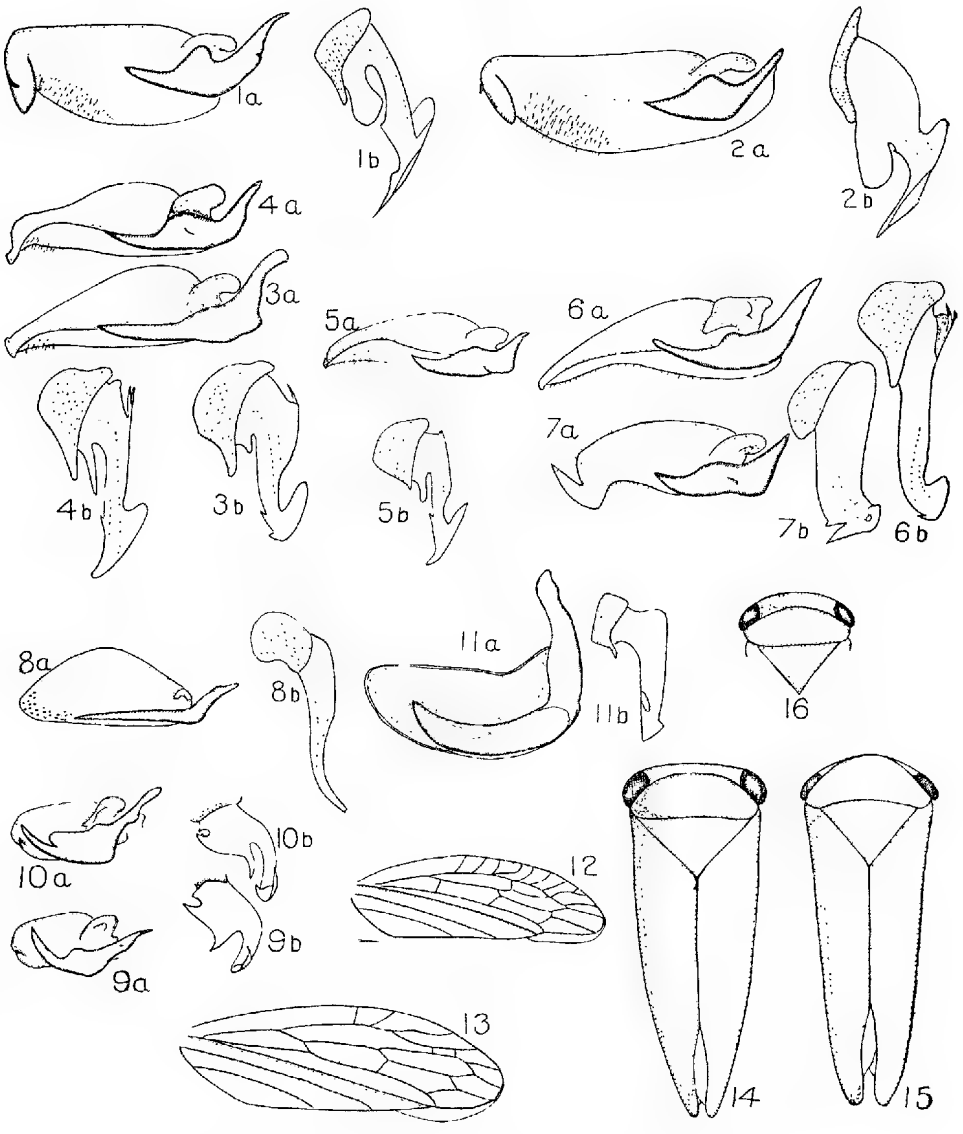

Fig. B.

Figure 1a .. *Ipoella fidelis*, subgenital plate and paramere.
„ 1b .. „ „ aedeagus.
„ 2a .. *Ipoella canberrensis*, subgenital plate and paramere.
„ 2b .. „ „ aedeagus.
„ 3a .. *Anipo porriginosa*, subgenital plate and paramere.
„ 3b .. „ „ aedeagus.
„ 4a .. *Anipo brunneus*, subgenital plate and paramere.
„ 4b .. „ „ aedeagus.
„ 5a .. *Anipo unimaculata*, subgenital plate and paramere.
„ 5b .. „ „ aedeagus.
„ 6a .. *Kalipo rubrivenosa*, subgenital plate and paramere.
„ 6b .. „ „ aedeagus.
„ 7a .. *Kalipo signoreti*, subgenital plate and paramere.
„ 7b .. „ „ aedeagus.

(Continued on opposite page)

Ipoella canberrensis, n. sp.

Description.—Length, 7 mm. Head, width, 2·5 mm., pale yellow with a large dark T-shaped mark; crown, grey mottled with brown. Pronotum, greyish-brown mottled with black. Scutellum, yellowish-brown mottled with black. Tegmen, hyaline, largely suffused with dark brown, with an indistinct anterior transverse hyaline fascia. Thorax, ventral surface black. Legs, femora pale brown, tibiae streaked with pale and dark brown. Abdomen, ventral surface dark brown. Male genitalia as in fig. B, figs. 2a and 2b. Host plant, *Eucalyptus* spp.

Distribution.—Federal Capital Territory.

Type, ♂ from Canberra (coll. J. W. E.), in the collection of the C.S.I.R. Division of Entomology at Canberra.

IPOELLA INSIGNIS Distant.

Eurymeloides insignis Dist., Ann. Soc. Ent. Belg. 52; 103, 1908.

It is very probable that this species belongs to this genus, but since the type specimen is a female, this point cannot be definitely settled until more material is available for study. The description given below is of the type specimen.

Description.—Length, 7 mm. Head, width, 2·5 mm., yellowish-brown, the maxillary plates whitish. Pronotum, pale yellowish-brown. Scutellum, pale chestnut-brown. Tegmen, chocolate-brown, with two transverse fasciae, the anterior white and opaque, the posterior transparent and widest at the costal margin of the tegmen; clavus, pale yellowish-brown. Thorax and abdomen, ventral surface, pale yellowish-brown. Legs, femora, pale yellowish-brown; tibiae marked with an irregular pattern of yellow and brown; tarsi dark brown, but for the first tarsal segment of the hind tibiae, which are white.

Type, ♀ from Queensland, in the collection of the British Museum.

Anipo, gen. nov.

This genus differs from the preceeding one, to which it is closely related, principally in the structure of the male genitalia. The hind tibiae have one spur and no additional spines.

ANIPO PORRIGINOSA Signoret. (Genotype.)

Eurymela porriginosa Sign., Ann. Soc. Ent. Fr. (2) viii.; 51, 1850.

Bythoscopus luridus Walker, List Homopt. iii.; 870, 1851.

Description.—Lengh, 7 mm. Head, width, 2·6 mm., pale yellowish-brown. Pronotum, reddish-brown mottled with grey. Scutellum, chestnut-brown. Tegmen, hyaline, veins pinkish. The tegmen may be dotted with white spots or have

Fig. B (continued).

Figure 8a .. *Citripo flandersi*, subgenital plate and paramere.
„ 8b .. „ „ aedeagus.
„ 9a .. *Pauripo insularis*, subgenital plate and paramere.
„ 9b .. „ „ aedeagus.
„ 10a .. *Pauripo continentalis*, subgenital plate and paramere.
„ 10b .. „ „ aedeagus.
„ 11a .. *Opio multistrigia*, subgenital plate and paramere.
„ 11b .. „ „ aedeagus.
„ 12 .. *Anipo porriginosa*, tegmen.
„ 13 .. *Opio multistrigia*, tegmen.
„ 14 .. *Opio multistrigia*.
„ 15 .. *Anipo brunneus*.
„ 16 .. *Citripo flandersi*, dorsal surface of head and thorax.

an anterior white fascia varying in shape (fig. B, fig. 12). Thorax and abdomen, ventral surface pale yellowish-brown. Legs, pale brown. Male genitalia, as in fig. B, figs. 3a and 3b. Subgenital plates narrower and the parameres longer than with the previous genus; aedeagus with anterior dorsal spines in addition to a posterior ventral flap. Host plant, *Eucalyptus* spp.

Distribution.—Queensland, New South Wales and South Australia.

Anipo brunneus, n. sp. (Fig. B, fig. 15.)

Description.—Length, 5 mm. Head, width, 2·2 mm., yellowish-brown, eyes red. Pronotum, yellowish-brown spotted with white. Scutellum, yellowish-brown. Tegmen, hyaline, greenish-yellow in colour. Thorax and abdomen, ventral surface, very pale yellowish-brown. Legs, yellowish-brown. Male genitalia, as in fig. B, figs. 4a and 4b. Very similar to those of the genotype. Host plant, *Eucalyptus* spp.

Distribution.—New South Wales.

Type, ♂ from Canberra F.C.T. (coll. A. L. Tonnoir), in the collection of the C.S.I.R. Division of Entomology at Canberra, described from a long series of males and females.

Anipo unimaculata, n. sp.

Description.—Length, 5 mm. Head, width, 2·2 mm., yellowish-brown, vertex and crown chestnut brown, eyes red. Pronotum, deep chocolate-brown, the posterior margin whitish. Scutellum, pale brown. Tegmen, pale yellowish-hyaline but for an area between the radius and the costa, not extending as far as where the median vein leaves the radius, which is very dark brown or black. Thorax, ventral surface, very dark brown or black and yellowish. Legs, yellowish, excepting the distal three-quarters of the hind femora and the proximal halves of the hind tibiae, which are dark brown. Abdomen, ventral surface, very pale yellowish-brown. Male genitalia, as in fig. B, figs. 5a and 5b. Very similar to those of the genotype.

Distribution.—Queensland.

Type, ♂ from Brisbane (coll. H. Hacker), paratypes 1 ♂ and 2 ♀'s. Type and paratypes in the collection of the South Australian Museum.

Katipo, gen. nov.

This genus can be distinguished from the two previous ones, to which it is closely related by the character of the hind tibiae, which bear two distinct spurs in addition to numerous spines.

KATIPO RUBRIVENOSA Kirkaldy.

Eurymeloides rubrivenosus Kirk., H.S.P.A. Exp. Sta. Bull. 1 (9); 353, 1906.

Eurymeloides lentiginosus Kirk., H.S.P.A. Exp. Sta. Bull. 1 (9); 353, 1906.

Description.—Length, 5 mm. Head, width, 2·3 mm., black or brown with yellow spots, the maxillary plates and the external margins of the frons and lorae, yellowish. Pronotum, black or brown with cream coloured spots, the anterior lateral angles brownish. Scutellum, brown. Tegmen, claval and proximal area brown, the rest black with several round transparent areas, and a large area against the distal costal margin, usually transparent; veins pink; there may be an indistinct narrow white median transverse fascia, seldom extending into the clavus. Thorax, ventral surface, black or yellow. Legs, entirely black, entirely brown, or black and brown. Abdomen, ventral surface pale brown or black. Male genitalia, as in fig, B, figs. 6a and 6b. Similar to those of *Anipo* spp.; the aedeagus without an anterior ventral process. Host plant, *Eucalyptus* spp.

Distribution.—Queensland, New South Wales and South Australia.

Katipo signoreti, n. sp.

Description.—Length, 5 mm. Head, width, 2·2 mm., yellowish-brown; with or without a median black longitudinal stripe stretching from the base of the clypeus to the dorsal margin of the frons; crown and vertex black, spotted with cream and white. Pronotum, grey mottled with black, or pale brown. Scutellum, coloured with a variable pattern of brown and black, or entirely brown. Tegmen, hyaline, suffused with pale brown and dotted with numerous round transparent and whitish spots. Thorax, legs and abdomen, yellow and black, or entirely yellowish. Male genitalia, as in fig. B, figs. 7a and 7b. Subgenital plates with an apical hook-like process, aedeagus without any posterior dorsal spines. Host plant, *Eucalyptus* spp.

Distribution.—New South Wales.

Type, ♂ from Canberra, F.C.T. (coll. J. W. E.), in the collection of the C.S.I.R. Division of Entomology at Canberra.

Citripo, gen. nov.

This genus differs from the preceding ones in being less narrowly wedge-shaped. The head is visible from above as a broad even band. The tegmen has only a few (1-5) costal cells. The hind tibia has only one spur in addition to numerous strong spines, and the male genitalia are differently shaped.

Citripo flandersi, n. sp.

Description.—Length, 5 mm. Head (fig. B, fig. 16), width, 2·3 mm., black, the frons, crown and vertex mottled with yellow, the rest of the head is similarly coloured, but the black areas are less dense; eyes black. Pronotum and scutellum, yellowish-grey mottled with black. Tegmen, hyaline, densely mottled with dull brown; an anterior opaque somewhat rounded fascia, surrounded by an opaque black area. Thorax and abdomen, ventral surface, black. Legs, blackish-brown with white spots. Male genitalia as in fig. B, figs. 8a and 8b. Parameres long and narrow, aedeagus simple. Host plant, *Eremocitrus glauca* (Native Lime).

Distribution.—Queensland.

Type, ♂ from Queensland (coll. S. Flanders), in the collection of the C.S.I.R. Division of Entomology at Canberra.

Pauripo, gen. nov.

This genus contains two small squat species, which differ from each other principally in the characters of the male genitalia. Head, broad, the frons more or less hexagonal; maxillary plates broad; only a narrow border of the crown visible dorsally. Pronotum narrow. Tegmina tectiform apically, appendix continuing narrowly round the apex. Hind tibia with a large spur on one of the inner edges and two somewhat smaller ones on the other. Male genitalia with small styles on the ventral edges of the small subgenital plates.

NOTE.—This genus is included in the Ipoinae on account of its general resemblance to insects in the preceding genera, although the development of a style on the subgenital plates suggests relationships with the Eurymelinae.

Pauripo insularis, n. sp. (Genotype.)

Description.—Length, 4 mm. Head, width, 1·5 mm., chestnut-brown suffused to a varying extent with very dark brown or black, the maxillary plates and lorae frequently paler than the rest of the head. Pronotum, greyish-brown mottled with dark brown. Scutellum, black. Pronotum, hyaline, mottled with dull brown, especially in the claval area; veins brown or pink. The tegmina may

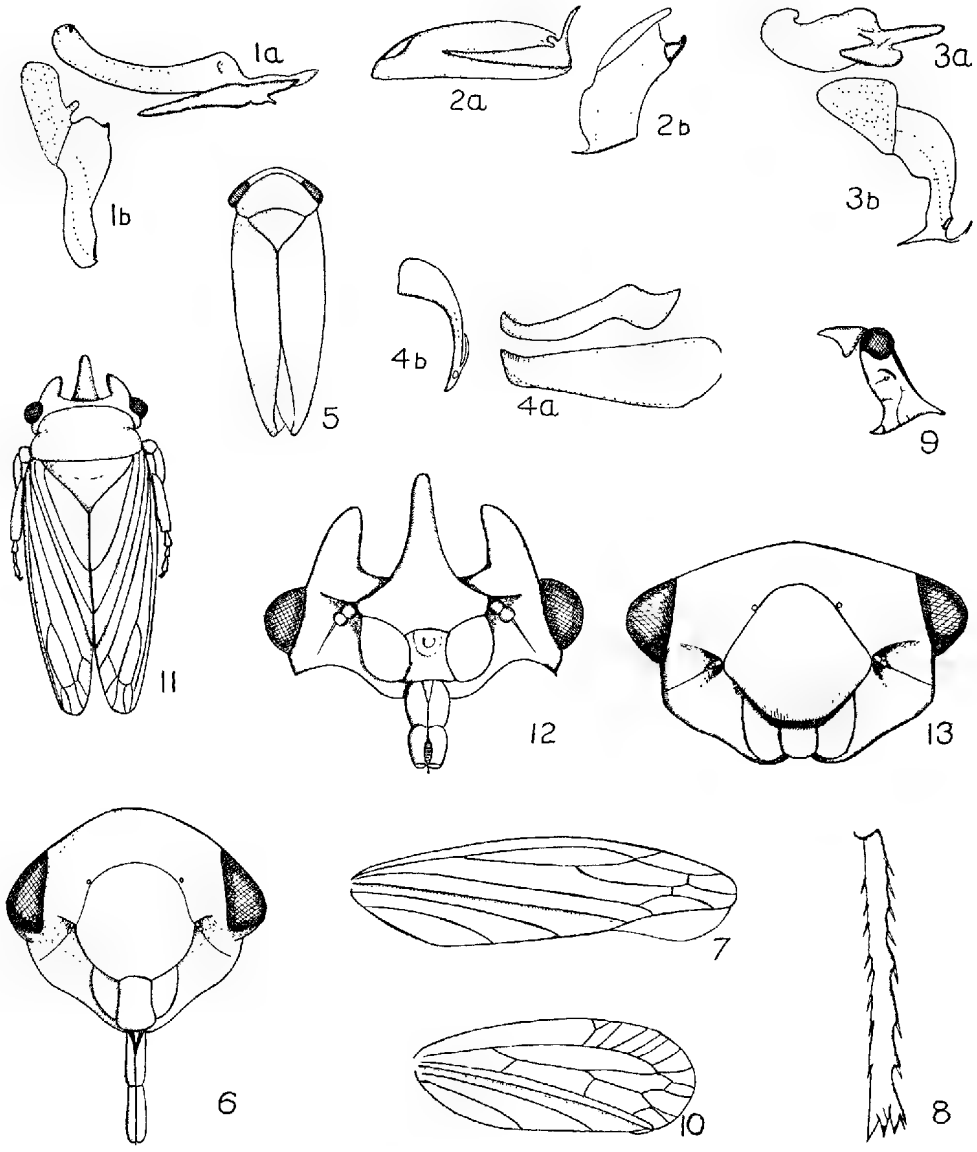

Fig. C.

Figure 1a .. *Cornutipo scalpellum*, subgenital plate and paramere.
„ 1b .. „ „ aedeagus.
„ 2a .. *Anacornutipo lignosa*, subgenital plate and paramere.
„ 2b .. „ „ aedeagus.
„ 3a .. *Cornutipoides tricornis*, subgenital plate and paramere.
„ 3b .. „ „ aedeagus.
„ 4a .. *Ipocerus procurrens*, subgenital plate and paramere.
„ 4b .. „ „ aedeagus.
„ 5 .. *Ipocerus procurrens*.
„ 6 .. *Ipocerus procurrens*, head.
„ 7 .. „ „ tegmen.
„ 8 .. „ „ hind tibia.

(Continued on opposite page)

be entirely hyaline but for the claval area, and in some specimens there are traces of narrow anterior and posterior transverse fasciae. Thorax, ventral surface, pale biscuit colour, suffused to a varying extent with black. Legs, femora, pale yellowish-brown; tibiae with a number of distinct oval white spots, the external edges of the hind tibiae may be dark brown. Abdomen, ventral surface, pale yellowish-brown. Male genitalia, as in fig. B, figs. 9a and 9b. Subgenital plates more or less rectangular with small styles at the apex of the ventral margin; aedeagus with apical spines and an anterior ventral process.

Distribution.—Kangaroo Island, South Australia.

Type, ♂ from Vivonne Bay, Kangaroo Island, paratypes 1 ♂ and 2 ♀'s. Type and paratypes in the collection of the South Australian Museum.

Pauripo continentalis, n. sp.

Description.—Length, 4 mm. Head, width, 1·5 mm., chestnut brown. In some specimens the frons and vertex are black. Pronotum, chestnut, or very dark brown, mottled with black. Scutellum, black. Tegmen, dull brown with irregular hyaline areas, these are largely transverse; veins brown or pinkish. Thorax and abdomen, ventral surface, pale brown. Legs, pale yellowish-brown, the tibiae with a number of oval white spots. Male genitalia, as in fig. B, figs. 10a and 10b. The parameres are broader than those of the genotype, and the aedeagus a little differently shaped.

Distribution.—South Australia.

Type, ♂ from Lucindale, South Australia (coll. A. H. Elston); paratypes, 3 ♀'s, one from the type locality and two from Adelaide.

Cornutipoini.

The insects comprised in this genus and in the two following genera, though not superficially resembling each other, are evidently fairly closely related, morphologically in the character of the production of the frons into a ledge, spatulate process or a horn, and also as evidenced by the general colouration. While *A. lignosa* is widely distributed in the more settled areas of the continent, *C. scalpellum* appears to be confined to the arid interior regions, and *C. tricornis* to North-Western Australia.

Anacornutipo, gen. nov.

Narrowly wedge-shaped, head nearly twice as broad as long, maxillary plates wide, the frons, vertex and crown, all but the dorsal margin, flat; the anterior edge of the frons is produced so that it overhangs the clypeus, which is almost at right angles to it. The femora of the first two pairs of legs bear a row of short blunt spurs on their interior edges, and the hind tibiae have one spur and a few very small spines.

ANACORNUTIPO LIGNOSA Walker. (Genotype.)

Eurymela lignosa Walker, Homopt. Ins. Suppl. 166, 1858.

Description.—Length, 4·8 mm. Head (fig. C, fig. 13), 2·2 mm. wide, brown mottled with dark brown or black. Pronotum and scutellum, concolorous with the tegmina. Tegmen, opaque, dull brown, chocolate-brown or blackish-brown, with irregular white markings; in some specimens these are arranged as fasciae; the

Fig. C (continued).

Figure 9 .. *Cornutipo scalpellum,* head in profile.
„ 10 .. „ „ tegmen.
„ 11 .. *Cornutipoides tricornis.*
„ 12 .. *Anacornutipo lignosa,* head.
„ 13 .. „ „ head.

apical third of the tegmen may be whitish-hyaline. Thorax, ventral surface, black. Legs marked with a variable pattern of light and dark brown. Abdomen, ventral surface pale yellowish-brown. Male genitalia as in fig. C, figs. 2a and 2b. Subgenital plates narrow, slightly recurved at the apex dorsally, aedeagus with a posterior dorsal spur or prominence. Host plant, *Eucalyptus*, spp.

Distribution.—All States.

Cornutipo, gen. nov.

Eyes semi-globular, distinctly prominent. Head vertical with vertex flat, the frons strongly recurved and produced at the apex into an angular flap-like process; labium extending to the base of the middle pair of legs; maxillary plates narrow. Pronotum with the anterior and posterior margins almost straight, the lateral margins wide, so that the base of the tegmen is not close to the head; propleuron with a narrow posteriorly-directed process extending over the mesopleuron. Tegmina not tectiform apically, the appendix small. Tibiae flattened, sub-dilated, the hind tibiae with a small spur and no spines. Male genitalia very small, the subgenital plates not nearly reaching to the apex of the abdomen.

Cornutipo scalpellum, n. sp.[4] (Genotype.)

Description.—Length, ♂, 5·5-6 mm.; ♀, 8 mm. Head, width, 2·8 mm., the lorae, clypeus and ventral surface of the frons, whitish-yellow with a few small brown markings, the rest of the head pale yellowish-brown mottled with black (fig. C, fig. 9). Pronotum, greyish-brown, or white mottled with yellow or black, some specimens have a median longitudinal pale stripe. Scutellum marked with a pattern of ochreous and black. Tegmen, greyish or whitish with fuscous punctures, veins pale yellowish-white or brown, the proximal costal and claval areas whitish; some specimens have in addition an irregular whitish or hyaline area towards the apex of the tegmen (fig. C, fig. 10). Thorax, ventral surface black and pale straminaceous. Legs, pale and dark brown. Abdomen, ventral surface pale brown. Male genitalia as in fig. C, figs. 1a and 1b. Resembling those of *A. lignosa* in the shape of the subgenital plates and in the possession of an anterior dorsal prominence on the aedeagus. Host plant, *Eucalyptus dichromophloia* (Lake Mackay).

Distribution.—Queensland and Central Australia.

Type, ♂ from Duaringa, Queensland, in the collection of the British Museum. Described from a long series of both sexes.

Cornutipoides, gen. nov.

The species in this genus resembles *C. scalpellum* in the structure of the prothorax and subgenital plates; also the venation and colouration of the tegmina of the two species is similar. The head bears three horns, the frons being produced into an upward-turning horn, and the vertex on each side between the eyes and the margin of the frons, into two downward and inward-projecting horns. The hind tibiae are quadrilateral in section and bear one spur and a few small spines.

Cornutipoides tricornis, n. sp. (Genotype.) (Fig. C, fig. 11.)

Description.—Length, 6 mm. Head, width, 2·2 mm., punctate mottled with ochreous and very dark brown (fig. C, fig. 12). Pronotum and scutellum, yellowish, mottled with dark brown. Tegmen, hyaline mottled with brown, the claval area, which is on a plane with the scutellum, punctate; veins distinct, brown; there may be incomplete anterior and posterior fasciae. Thorax, ventral surface very dark brown. Legs, pale or dark brown, closely appressed ventrally to the body. Abdomen, ventral surface, pale brown. Male genitalia, as in fig. C, figs. 3a

[4] The late Dr. C. F. Baker had ascribed this name (in manuscript) to this species.

and 3b. Subgenital plates very small, parameres less than half the length of the plates.

Distribution.—North-western Australia.

Type, ♂, paratypes, 1 ♂ and 2 ♀'s; all four specimens in the collection of the South Australian Museum.

Opioni. **Opio,** gen. nov.

This isolated and distinct genus contains only one species. Insects narrowly wedge-shaped; head only slightly wider than long, flat, the maxillary plates, lorae and clypeus being on the same plane as the frons; labium reaching to the base of the hind legs; hind margin of the crown from above, only slightly curved. Hind tibiae with three spurs decreasing in size from the apex of the tibiae to the base.

Opio multistrigia Walker. (Genotype.) (Fig. B, fig. 14.)

Bythoscopus multistrigia Walk., Insecta Saund., Homopt., 105, 1858.

Description.—Length, 7 mm. Head, width, 3 mm., bright yellow with black markings. Pronotum, greyish-yellow with black markings, and a pale median longitudinal stripe. Scutellum, brown and black with two longitudinal yellow bands, which are narrower at the anterior than at the posterior margin. Tegmen (fig. B, fig. 13), long and narrow, black with bright yellow and whitish longitudinal stripes; the posterior costal area may be hyaline. Thorax and abdomen, ventral surface pale yellowish-white. Legs, marked with a pattern of yellow and black. Male genitalia, as in fig. B, figs. 11a and 11b. Host plant, *Casuarina* sp.

Distribution.—New South Wales.

Ipocerus, gen. nov.

Species comprised in this genus have certain characters that separate them from the Eurymelidae, and they cannot be placed in any of the known subfamilies of the Bythoscopidae. The head is Eurymeloid in character, the maxillary plates, frons and lorae being wide and the frontal suture complete anteriorly; the labium is long, reaching to between the bases of the hind legs; and the crown is visible from above as a narrow margin. The pronotum is deeply emarginate, and the scutellum narrow, the anterior corners of the latter not nearly reaching to the sides of the body. The tegmina are not tectiform; they narrow apically and the appendix is large but does not continue round the apex of the tegmen. The hind tibiae bear three rows of spines, three of these on one row being set on enlarged bases, somewhat resembling, but less pronounced than those found in the Eurymelidae proper. The male genitalia consist of long, flat subgenital plates and parameres, both slightly curved inwards apically; they are somewhat Idiocerine in character.

Species in this genus are apparently confined to Western Australia. Mr. D. C. Swan, who collected some specimens of *I. procurrens* in October, 1930, informs me that he took them in the cracks in the bark of *Eucalyptus calophylla,* that the nymphs jumped when disturbed, and that they were not attended by ants.

For convenience this genus is temporarily placed with the Ipoinae, until as a result of further research it becomes possible to assign it either to its correct subfamily or to erect a new subfamily to contain it.

Ipocerus procurrens Jacobi. (Genotype.) (Fig. C, fig. 5.)

Ipo procurrens Jacobi, Faun. S.-W. Aust., Michaelsen u. Hartmeyer, ii.; 340, 1909.

Description.—Length, 4·8 mm. Head, width, 2 mm., as wide as long, grey or cream-coloured, mottled with brown or black; frons brown with cream-coloured

markings; eyes dark brown (fig. C, fig. 6). Pronotum, concolorous with the head. Scutellum, black with yellowish markings. Tegmen, pale or dark brown with oval, round and irregularly shaped hyaline areas; distal half of appendix, brown (fig. C, fig. 7). Thorax, ventral surface dark brown. Legs, pale yellowish-brown mottled with dark brown, with numerous spines, three of them being set on enlarged bases (fig. C, fig. 8). Abdomen, ventral surface brown. Male genitalia, as in fig. C, figs. 4a and 4b. Subgenital plates and parameres long, narrow and flat, somewhat thickened apically.

Distribution.—South-western Australia.

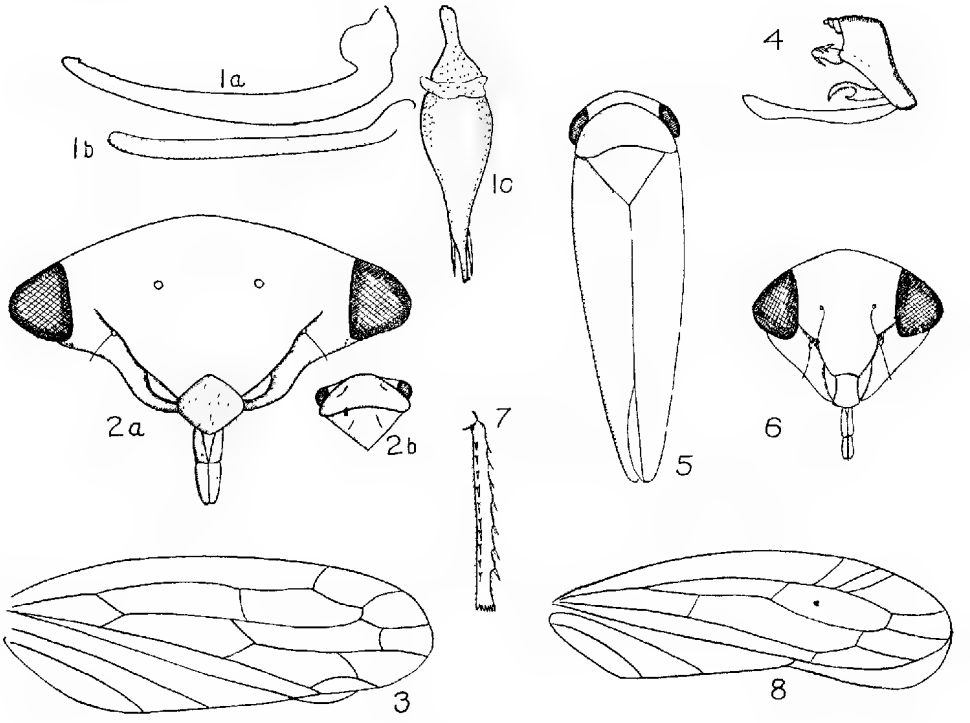

Fig. D.

Figure 1a .. *Stenoscopus drummondi*, subgenital plate.
„ 1b .. „ „ paramere.
„ 1c .. „ „ aedeagus.
„ 2a .. *Stenoscopus drummondi*, head.
„ 2b .. „ „ dorsal view of head and thorax.
„ 3 .. „ „ tegmen.
„ 4 .. *Idiocerus leurensis*, male genitalia, lateral view.
„ 5 .. *Idiocerus leurensis*.
„ 6 .. „ „ head.
„ 7 .. „ „ hind tibia.
„ 8 .. „ „ tegmen.

Bythoscopidae.

Bythoscopinae. **Stenoscopus,** gen. nov.

Head from above wider than long, the frons, of which the posterior margin is ill-defined, lying on a different plane from the rest of the head. The antennae lie in pits below the overhanging lateral margins of the frons, and the ocelli are

situated on the vertex well away from the frons. The eyes are small but prominent, the lorae small, and the clypeus more or less diamond-shaped. The labium is short, not reaching beyond the bases of the fore legs, and the crown of the head is only visible from above laterally against the eyes. The pronotum is wide at the sides, separating the head from the bases of the tegmina, and the anterior and posterior borders are not parallel to each other. The tegmen has a small appendix and only four apical cells; and the hind tibia is armed with numerous spines that arise direct from the tibia itself. The male genitalia consist of long, narrow subgenital plates and parameres, and a flask-shaped aedeagus.

Stenoscopus drummondi, n. sp. (Genotype.)

Description.—Length, 7 mm. Head, width, 2·2 mm., rugose, ochreous, with a pattern of well-defined but variable, very dark brown markings; eyes pale or dark reddish-brown (fig. D, figs. 2a and 2b). Pronotum, dull yellow with dark brown markings. There are two lateral depressions close to the anterior border. Scutellum, bright yellow; lateral angles black. Tegmen, transparent, veins black; venation as in fig. D, fig. 3. Thorax and abdomen, ventral surface and legs dull yellow. Male genitalia as in fig. D, figs. 1a, 1b and 1c.

Type, ♂, from Beverley, Western Australia; paratypes, 2 ♀'s from Bruce Rock, Western Australia (coll. F. Drummond). Type and one of the paratypes in the collection of the South Australian Museum.

Idiocerinae. *Idiocerus* Lewis (type, *I. adustus* H.).

The characters given below are not necessarily of generic significance within the Idiocerinae, but are sufficient to enable the separation of insects belonging to this genus from the Eurymelidae.

Head, triagular in shape; eyes big, not prominent; ocelli lying at the apices of the lateral margins of the frons; clypeus more or less rectangular; maxillary plates narrow, the external margins straight, not curved; antennae long, the flagellae projecting well beyond the sides of the head; labium extending as far as the middle pair of legs. Head from above, the crown broad and as wide in the centre as against the eyes. Tegmen with only two subapical cells between the radius and the cubitus, the appendix very large. Hind tibia with three rows of spines that decrease in size from the apex of the tibia to the base. Male genitalia with the subgenital plates long and narrow, extending well beyond the apex of the abdomen. The parameres are short and flat and do not extend as far as the middle of the plates.

Idiocerus leurensis, n. sp. (Fig. D, fig. 5.)

Description.—Length, 8 mm. Head, width, 2·1 mm., yellowish; eyes, dull red (fig. D, fig. 6). Pronotum and scutellum, pale greenish-yellow. Tegmen, pale greenish, hyaline, veins yellow (fig. D, fig. 8). Thorax and abdomen, ventral surface and legs pale yellow. Male genitalia as in fig. D, fig. 4.

Type, ♂, from Leura, New South Wales (coll. J. W. E.); paratypes, 2 ♀'s, one from the type locality, and one from "Blundells," F.C.T. Type and one of the paratypes in the collection of the C.S.I.R. Division of Entomology at Canberra.

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